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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,893	08/30/2001	Hironori Sumitomo	15162/03910	9827

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EXAMINER

AGGARWAL, YOGESH'K

ART UNIT	PAPER NUMBER
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2622

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/942,893

Applicant(s)

SUMITOMO ET AL.

Examiner

Yogesh K. Aggarwal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 13-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 13-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/02/2006 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-7 and 13-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, 4, 13, 15, 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawaoka et al. (US Patent # 6,801,251) in view of Akasawa (US Patent # 6,795,116).

[Claims 1 and 13]

Kawaoka et al. teaches an image taking apparatus (figures 6-17), comprising an image pick-up element (13) which picks up a plurality of images different in photographing condition (different

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photographing conditions are read as scene of entrance, scene of cake cutting etc. , col. 11 line 65-col. 12 line 13), an image memory (56) which temporarily stores said plurality of images picked up by said image pick-up element (col. 13 lines 9-16, figure 17 step 92). Kawaoka teaches that a synthesis area number N representing the order in which the images are synthesized with the synthesis areas is set (col. 13 lines 5-8) and an image represented by the image data corresponding to the synthesis area number N is synthesized with the N-th synthesis area (col. 13 lines 29-32) and therefore reads on an image-number-specifying device (55) which specifies the number of images to be used for creating a composite image. Kawaoka further teaches that all the images are stored in a memory 56 after transferring from a memory card and then images that are to be synthesized are selected from among said plurality of images stored in the memory 56 (col. 13 lines 16-24). Kawaoka teaches that one frame of an image which is used for synthesizing a composite image is determined for each of the scenes while each frame of an image is being displayed on the display device 29 of the digital camera (col. 12 lines 20-35) and an image composer which creates said composite image by composing images of said number of images specified by said image-number specifying device (col. 13 lines 40-48).

Kawaoka fails to teach wherein a plurality of images are picked up in response to only one shutter command. However Akasawa teaches wherein continuous photographic images are photographed by releasing the shutter one time and recorded and group number 1 is assigned to the images (col. 5 lines 15-21). Kawaoka also teaches that these number of images are combined together (col. 5 lines 36-42).

Therefore taking the combined teachings of Kawaoka and Akasawa, it would be obvious to one skilled in the art at the time of the invention to have been motivated to have a plurality of

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images are picked up in response to only one shutter command and being combined (synthesis) together instead of multiple commands so that the user presses the shutter only once thereby making it easier for the user to take multiple photographs without missing a photographing chance.

[Claims 3 and 15]

The maximum number of images that can be specified by the image-number-specifying device used for creating a composite image that can be stored in the memory 56 cannot exceed the maximum number of images that the memory card can store because the capacity of the card is full. For example, if the number of images that a memory card can store is 4 then the maximum number of images specified for creating a composite image cannot exceed 4 because that's the maximum the memory can store.

[Claims 4 and 16]

Kawaoka teaches a display device for displaying images sequentially (col. 13 lines 22-24).

[Claim 20]

Kawaoka teaches that one frame of an image which is used for synthesizing a composite image is determined for each of the scenes while each frame of an image is being displayed on the display device 29 of the digital camera. Image data, which is not used for synthesizing is being deleted from the image storage file in response to an inputted command (col. 12 lines 20-35). The Examiner notes that by selecting the frames for synthesizing a composite image and deleting the other frames, a number of images are selected for synthesizing. It would be obvious to one skilled in the art that a user would have to select a representative frame from among the frames

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stored and issue a delete command for other commands in order to have an image that is likable to the user for a given composite image.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawaoka (US Patent # 6,801,251), Akasawa (US Patent # 6,795,116) and further in view of Shen et al. (US Patent # 6,122,411).

[Claims 2 and 14]

Kawaoka in view of Akasawa teaches the limitations of claim 1 but fails to teach "wherein the number of images to be stored in said image memory is decided by capacity of said image memory and image size".

However Shen et al. teaches that the number of images to be stored in said image memory is decided by capacity of said image memory and image size (col. 4 lines 16-35).

Therefore taking the combined teachings of Kawaoka, Akasawa and Shen it would have been obvious to one skilled in the art at the time of the invention to have been motivated to have the number of images to be stored in said image memory be decided by capacity of said image memory and image size in order to use the memory efficiently. The benefit of doing so would be to control the utilization of memory space in such a way that the memory space can be used efficiently and in a cost-effective manner.

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7. Claim 5, 6, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawaoka (US Patent # 6,801,251), Akasawa (US Patent # 6,795,116) and further in view of Okauchi et al. (US Patent # 5,907,353).

[Claims 5, 6, 17, 18]

Kawaoka in view of Akasawa fail to teach a selector for specifying one of photographing modes including a mode, which gives priority to quality of image, and a mode, which gives priority to speed and a controller for automatically setting the number of images to be stored in said image memory depending on a specified photographing mode.

However Okauchi teaches a selector (figure 1, element 5) for specifying one of photographing modes like a 'high quality mode' and a 'normal quality mode' (col. 4 lines 28-36), which would inherently require it to give priority to higher quality during 'high quality mode' and priority to speed during 'normal quality mode' because the number of images to be synthesized are lesser and a controller for automatically setting the number of images to be stored in said image memory depending on a specified photographing mode (col. 9 lines 21-32, col. 9 lines 52-62) (Either 4 or 9 images can be specified depending upon a focus evaluation mode as shown in figure 4) in order to obtain an image with higher quality than that obtained in the normal mode by extracting one or a plurality of images from an object image and synthesizing the extracted images.

Therefore taking the combined teachings of Okauchi, Akasawa and Shen it would have been obvious to one skilled in the art at the time of the invention to have been motivated to have a selector for specifying one of photographing modes including a mode which gives priority to quality of image and a mode which gives priority to speed and a controller for automatically

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setting the number of images to be stored in said image memory depending on a specified photographing mode in order to obtain an image with higher quality than that obtained in the normal mode by extracting one or a plurality of images from an object image and synthesizing the extracted images.

8. Claims 7 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawaoka (US Patent # 6,801,251), Akasawa (US Patent # 6,795,116), Okauchi (US Patent # 5,907,353) and in further view of Shen et al. (US Patent # 6,122,411).

[Claims 7 and 19]

Kawaoka, Akasawa in view of Okauchi teach the limitations of claim 6 but fails to teach “wherein the number of images to be stored in said image memory is the maximum number of images that said image memory can store when said mode which give priority to quality of image is specified”.

However Shen et al. teaches a condition when the high resolution mode is specified (corresponding to a mode which gives priority to the quality of image) and there is not enough space to take any more high resolution pictures (maximum number of images that said image memory can store for the ‘high resolution mode’) but there is space for storing at least one more low resolution picture. When this condition is reached the camera automatically switches to a low-resolution mode after storing the maximum number of images in the high-resolution mode (col. 3 lines 59-67, col. 4 lines 1-35).

Therefore taking the combined teachings of Kawaoka, Akasawa, Okauchi and Shen it would have been obvious to one skilled in the art at the time of the invention to have been motivated to have the number of images to be stored in said image memory being the maximum

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number of images that said image memory can store when said mode which give priority to quality of image is specified in order to utilize the memory space efficiently. The benefit of doing so would be to store both low and high-resolution images (corresponding to different number of pixels) in the memory as long as there is space available in the memory as taught in Shen (col. 3 lines 60-63).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yogesh K. Aggarwal whose telephone number is (571) 272-7360. The examiner can normally be reached on M-F 9:00AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571)-272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


YKA

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January 14, 2007

A handwritten signature in black ink, appearing to read 'Vivek Srivastava', with a stylized, sweeping flourish at the end.

VIVEK SRIVASTAVA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600